

Abstract

An engine powered hand-held power tool and engine lubrication method is provided, the power tool being intended to be carried by an operator during use. The power tool has a frame, including a handle to be grasped by the operator, an implement affixed to the frame having a rotary input member, and a small four-cycle, lightweight, internal combustion engine attached to the frame for driving the implement. The four-cycle engine has a lightweight aluminum alloy engine block having a cylindrical bore and an enclosed oil reservoir formed therein. A crankshaft is rotatably mounted in the engine block for rotation about a crankshaft axis. A piston reciprocates within the bore and is connected to the crankshaft by a connecting rod. An oil splasher driven by the crankshaft intermittently engages the oil within the enclosed oil reservoir to splash-lubricate the engine. The engine is provided with a cylinder head assembly defining a compact combustion chamber having a pair of overhead intake and exhaust ports and cooperating intake and exhaust valves. A lightweight, high-powered engine is thereby provided having relatively low HC and CO emissions.